FORMAT TO UPLOAD SYNOPSIS

S.No.	Details	Description
1.	INSTITUTION NAME	LAKSHMIBAI NATIONAL INSTITUTE OF PHYSICAL EDUCATION ,GWALIOR
2.	DEPARTMENT	DEPARTMENT OF HEALTH SCIENCES
3.	NAME OF PH.D. SCHOLAR (eg. Surname, First Name, Middle name)	RAVINDER KUMAR KAUSHIK
4.	NAME OF SUPERVISOR (don't use Professor/Doctor) *please enter Joint Supervisor name/Co-Supervisor name, if any, separated by 'and' (e.g. Yadav, Ravi and Sharma, Ashish)	YADAV, SANJEEV
5.	TYPE OF DEGREE	PhD
6.	REGISTRATION YEAR (YYYY, e.g. 2021)	2022-23
7.	TITLE/TOPIC (Special Characters &!#$%^*()+=-[]\\\';,./{ }|\:? etc. are not allowed)	COMPARISON OF SELECTED PSYCHOLOGICAL VARIABLES AMONG KAYAKING, CANOEING AND ROWING PADDLERS
8.	ABSTRACT Abstract should not contain any [E.g. !@ #$%^&*() etc. and more than 2048 characters will not be acceptable]	The study titled "A Comparative Study of Selected Psychological Parameters Among Canoeing, Kayaking Athletes and Non-Athletes" focuses on examining and comparing mental toughness, coping mechanisms, and worry levels among athletes and non-athletes. The research involves 150 male participants aged 15 to 21 years, divided equally into three groups: canoeing athletes, kayaking athletes, and non-athletes, all from Madhya Pradesh. The primary objective is to assess and compare the psychological parameters using standardized questionnaires: the Mental Toughness Questionnaire (MTQ), Coping Questionnaire by Dr. Carver, and Worry Questionnaire by Mayer et al. The study hypothesizes that there will be significant differences in mental toughness, coping ability, and worry levels among the three groups. Data collection will be carried out through a single administration of the questionnaires, and the results will be

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		analyzed using descriptive statistics and one-way ANOVA, with a significance level set at 0.05. This research is significant as it may help identify psychological strengths and weaknesses in water sports athletes compared to non-athletes. The findings could assist athletes in improving mental aspects critical to performance and provide a basis for future research in sports psychology, particularly in understanding the mental demands of competitive water sports.
9.	KEYWORDS (please mention more than one keyword)	KAYAKING, CANOEING AND ROWING PADDLERS
10.	LANGUAGE	ENGLISH
11.	ATTACH SYNOPSIS (PDF not more than 10 MB)	YES

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"COMPARISON OF SELECTED PSYCHOLOGICAL VARIABLES AMONG KAYAKING, CANOEING AND ROWING PADDLERS"

SYNOPSIS

For

Ph.D (2022-23)

Scholar Name

Ravinder Kumar Kaushik

Supervisor

Dr. Sanjeev Yadav

Submitted to:

Research Development Committee of Department of Health Sciences

LNIPE, Gwalior

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Chapter-I

INTRODUCTION

Water sports brings a number of benefits both in terms of improving health and physical fitness. By practicing and mastering the technical elements in water sports, you gain a number of useful skills, such as the ability to move in the aquatic environment and to protect yourself against hazards in the aquatic environment. It is undeniable that selected physical activities in the aquatic environment affect human health. Consider general and special physical fitness, which is the basis for the success of athletes in water sports, and its monitoring, which allows you to assess the effectiveness of training and identify any errors in training carried out in the aquatic environment. When modeling various forms of activity or impact on humans in water-related conditions, the training programs can be modified through the use of various forms of control, which allows one to determine the optimal possibilities of influencing the athlete/human in relation to the conditions of practicing water-related activities. The implications of water sports for training, the environment and health results of various forms of control and the effects of progress in sports training, as well as pro-health, when practicing sports and recreational physical activity in an aquatic environment. The results of various research presenting innovative issues in the field of the development of physical fitness and the assessment of the methods used in sports training in individual sports disciplines based on the water environment, as well as solving problems related to the health-promoting effects of water on humans from various perspectives

Canoeing and kayaking are upper-body sports that make varying demands on the body, depending on the type of contest and the distance covered. The shorter events (500m) are

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Chapter-I

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primarily anaerobic (2 minutes of exercise), calling for powerful shoulder muscles with a high proportion of fast-twitch fibres. In contrast, 10,000m events call for aerobic work to be performed by the arms. Such contestants need a high proportion of slow-twitch fibres, and an ability to develop close to 100% of their leg maximum oxygen intake when paddling. In slalom and Whitewater contests, the value of physiological testing is somewhat limited, since performance is strongly influenced by experience and the ability to make precisely judged rapid paddling efforts under considerable emotional stress. Paddlers face dangers from their hostile cold water environment; causes of fatalities (drowning, cardiac arrest, ventricular fibrillation and hypothermia) are briefly reviewed. Medical problems include provision of adequate nutrition and a clean water supply, effects of repeated immersion (softening of the skin, blistering, paronychial infections, sinusitis, otitis), varicose veins (secondary to thoracic fixation) and hazards of exposure to fibreglass and polystyrene in the home workshop. Surgical problems include muscle sprains and mechanical injuries (haemotomas, lacerations, contusions, concussion, and fractures).

In highly technical sports, such as canoeing, kayaking over pacing at the beginning of the race may dramatically interfere with its technique towards the end, hence impairing movement efficiency. Faster athletes showed more even pacing, with a slower start but less time lost towards the end of the race. Medalists at major championships even conserved enough energy to accelerate during the last lap of the race, thus producing a more pronounced end-spurt than their lower-ranked competitors. Furthermore, as less experienced that is juniors, showed higher variation in their pacing pattern, well-adjusted and highly reliable pacing might be an important success factor during high-profile races.

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Water sport in which movements are repeated and force is applied in a repeated manner, mainly using the trunk and upper limbs, against the resistance force exerted by the water on the vessel (canoe). There are two well-differentiated disciplines within calm water kayaking based on the position of the boat and the paddling movement: the kayaker performs the paddling at both sides of the boat in a sitting position with his/her lumbar rachis flexed, whereas the canoeist paddles at one side only, performing a cyclic movement of flexion, rotation and lateral tilt. These differences in the paddling technique have been associated with certain specific adaptations in rachidial morphotype and pelvic arrangement. To understand these adaptations and the injury risk factors of this discipline, it is necessary to analyse in detail the sporting gesture of paddling in a canoe.

There is an increasing number of canoeists who suffer from injuries, partly due to the psychophysical demands to which these athletes are subjected when they reach a high-performance level, as well as to the greater pressure from the media on professional athletes, constantly requesting them to win. The latter cause also reaches non-professionals, leading them to adopt behaviours that may become dangerous for their physical integrity.

Describing the aetiology of injuries in canoeing and kayaking, knowing the factors that influence the rate of injuries, and the need for understanding why these injuries occur have been some of the main drivers of different studies. Knowing the most frequent injuries in these sports is important, considering the consequences for the athlete's sports career, health, and labour, social and economic life. Thus, detailed information about the rate of morbidity of the different injuries and the early identification of the associated epidemiological factors will allow the implementation of prevention programmes and intervention strategies, which would help to reduce the consequences of the most frequent injuries among these water sports. Therefore, the

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aim of the present study was to analyzed the mental health, emotional intelligence and coping strategies in such difficult situation during competition of high level performance.

STATEMENT OF THE PROBLEM

The purpose of this study is to analyse the mental health, emotional intelligence, and coping strategies in water sports.

OBJECTIVES

The following will be the objectives of this study:

1. To compare the mental health of the paddlers of Kayaking, Canoeing and Rowing..
2. To compare the emotional intelligence of paddlers of Kayaking, Canoeing and Rowing..
3. To compare the coping strategies of paddlers of Kayaking, Canoeing and Rowing..
4. To compare the mental health of the national and international paddlers in selected water sports.
5. To compare the emotional intelligence of the national and international paddlers in selected water sports.
6. To compare the coping strategies of the national and international paddlers in selected water sports.
7. To find the relationship between mental health of the para and normal paddlers in selected water sports.

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8. To find the relationship between emotional intelligence of the para and normal paddlers in selected water sports.

9. To find the relationship between coping strategies of the para and normal paddlers in selected water sports.

HYPOTHESIS

- There will be significant difference on the mental health of the paddlers of Kayaking, Canoeing and Rowing.
- There will be significant difference on the emotional intelligence of the paddlers of Kayaking, Canoeing and Rowing.
- There will be significant difference on the coping strategies of the paddlers of Kayaking, Canoeing and Rowing.
- There will be significant difference on the mental health of the national and international paddlers in selected water sports.
- There will be significant difference on the emotional intelligence of the national and international paddlers in selected water sports.
- There will be significant difference on the coping strategies of the national and international paddlers in selected water sports.
- There will be significant difference on the mental health of the para and normal paddlers in selected water sports.

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- There will be significant difference on the emotional intelligence of the para and normal paddlers in selected water sports.
- There will be significant difference on the coping strategies of the para and normal paddlers in selected water sports.

DELIMITATION

- The study will be delimited to 60 paddlers in selected water sports, that is kayaking Canoeing and Rowing.
- The study will be further delimited to the national and international level paddlers (Para and normal paddlers) in selected water sports of Madhya Pradesh state.
- The study will be further delimited to 20-30 years of age.
- The study will be further delimited to following variables, which are mental health, emotional intelligence, and coping strategies in water sports.

OPERATIONAL DEFINITION OF THE TERMS

Mental Health: Mental health is a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community. **(WHO)**

Emotional Intelligence: The ability to understand, use, and manage your own emotions in positive ways to relieve stress, communicate effectively, empathize with others, overcome challenges and defuse conflict. **(Goleman)**

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Coping Strategies: An action, a series of actions, or a thought process used in meeting a stressful or unpleasant situation or in modifying one's reaction to such a situation. **(American Psychology Association)**

Water Sports: Sports that take place on or in water. **(Cambridge dictionary)**

SIGNIFICANCE OF THE STUDY

The study may contribute in the following ways:

1. The study will be help to know the present status of the mental health, emotional intelligence, and coping strategies in water sports.
2. The result of the study will help to know the mental health, emotional intelligence, and coping strategies of the national and international participants in water sports.
3. The result of the study will help the water sports athletes in developing and improving their mental health, emotional intelligence, and coping strategies.
4. The study will provide bases for further researches in water sports.

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Chapter-II

REVIEWS OF RELATED LITERATURE

Pashaki et al. (2018) Mental disorders have harmful effects on individuals and society. A person who has not mental health suffers physical and mental symptoms, isolation, headache, worry, depression, anxiety, difficulty falling asleep and daily dysfunction. The purpose of this study was to survey and identify the effect of sports activities on non-active and active students' mental health. This study is a descriptive and ex-post facto research. The sample size was included 480 female students that they were randomly selected. The instrument of this study was included Goldberg's General Health Questionnaire-28 (GHQ-28).The collected data were classified by descriptive statistical methods (percentage, mean, standard deviation) and were analyzed by the T-test and the ChiSquare Test. The SPSS software (version 21) was used for data analysis ($\alpha \leq 0.05$). Married athlete students' general health score was 19.36, married non-athlete students' general health score was 20.11, single athlete students' general health score was 19.16 and single non-athlete students' general health score was 21.11.Sport activities are a valuable tool for maintaining mental health and those are effective on the prevention of mental disorders. The university authorities are recommended to increase the time of sports activities, so that students have more physical activities.

Shephard (2012) state that,Canoeing and kayaking are upper-body sports that make varying demands on the body, depending on the type of contest and the distance covered. The shorter events (500m) are primarily anaerobic (2 minutes of exercise), calling for powerful shoulder muscles with a high proportion of fast-twitch fibres. In contrast, 10,000m events call for aerobic work to be performed by the arms. Such contestants need a high proportion of slow-

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twitch fibres, and an ability to develop close to 100% of their leg maximum oxygen intake when paddling. In slalom and Whitewater contests, the value of physiological testing is somewhat limited, since performance is strongly influenced by experience and the ability to make precisely judged rapid paddling efforts under considerable emotional stress. Paddlers face dangers from their hostile cold water environment; causes of fatalities (drowning, cardiac arrest, ventricular fibrillation and hypothermia) are briefly reviewed. Medical problems include provision of adequate nutrition and a clean water supply, effects of repeated immersion (softening of the skin, blistering, paronychial infections, sinusitis, otitis), varicose veins (secondary to thoracic fixation) and hazards of exposure to fibreglass and polystyrene in the home workshop. Surgical problems include muscle sprains and mechanical injuries (haemotomas, lacerations, contusions, concussion, and fractures).

Zhang et al. (2021) proposed that, the WHO estimates that, with the development of urbanization, 25% of the population is suffering from psychological and mental distress. Preliminary evidence has suggested that aquatic environments and riparian areas, i.e., waterscapes, can benefit psychological and mental wellbeing. The aim of this study was to identify the processes of waterscape psychological and mental health promotion through aliterature review. We propose a design framework of waterscapes for achieving psychological and mental health in the general population that often visits waterscapes, which has the function of therapeutic landscapes through values of accessibility, versatility, habitats, and biodiversity. According to theories, waterscapes can improve psychological and mental health to divert negative emotions through mitigation (e.g., reduced urban heat island), instoration (e.g., physical activity and state of nature connectedness), and restoration (e.g., reduced anxiety/attentional fatigue). By accessing water (e.g., streams, rivers, lakes, wetlands, and the coast) and riparian

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areas, people can get in close contact with nature and spend more time in activities (e.g., walking, exploring, talking, and relaxing). Waterscapes with healing effects can enhance psychological resilience to promote people's psychological and mental health. Future research should focus on ensuring an adequate supply of waterscapes and promoting the efficiency of waterscape ecosystem services on mental health. Moreover, fora deep understanding of the complexity of nature–human health associations, it is necessary to explore more consistent evidence for therapeutic waterscapes considering the characteristics and functional mechanisms of waterscape quality, in terms of freshness, luminescence, rippling or fluidity, and cultural value, to benefit public health and biodiversity conservation.

Burrell&Burrell (1982) found out that, in brief Whitewater paddlers have very few injuries other than bruises and minor scrapes, and major injuries are the exception rather than the rule. Many of the injuries occur to capsized boaters, who are susceptible to hematomas, contusions, and abrasions from bumping into unseen rocks and obstructions as the river current carries them downstream. Two major chronic complaints are tendinitis of the wrist extensors and low back pain. Major injuries include head injuries, fractures, and shoulder dislocations and subluxations.

Buchholz et al. (1980) discuss the consequences of various kinds of sport such as canoeing, the numerous forms of jumping, football and cycling on the venous system and go on to consider the treatment of varicose veins and to recommend fairly broad indications for surgery based on stripping along the length of the internal saphenous vein, completed if necessary, by phlebosclerosis. The importance of keeping the leg in a sterile state during the post operative period is emphasised.

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Cerretelli&Pendergast (1979) study the effects of specific muscle training on VO2 on-response and early blood lactate. they found out that, the relationship between half time of the O2 uptake on-response (t1/2 VO2on, seconds) and early blood lactate accumulation (delta Lab, mmol. l (-1) at the onset of submaximal arm and/or leg exercise was the object of a cross-sectional study of sedentary subjects (S, n= 3), and kayakers (K, n= 8), and of a longitudinal study on 11 untrained subjects of specific arm vs. leg training. In supine arm cranking (W= 125 watts) S had an average t1/2 VO2on of 82 s and a delta Aab of 9.2 mmol.

Clarkson et al. (1982) work on the Isokinetic strength, endurance, and fiber type composition in elite American paddlers. they found out that, muscle fiber type and isokinetic strength and fatigue were examined in nine highly trained canoe and kayak paddlers. Needle biopsies were taken from the right vastus lateralis and biceps brachii muscles and the samples stained for myofibrillar ATPase. Baseline elbow flexion and knee extension isometric (0‡· s− 1) and isokinetic (60‡· s− 1 or 1.05 rad· s− 1 and 180‡· s− 1 or 3.14 rad· s− 1) peak torques were determined.

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Chapter-III

METHODOLOGY

Selection of subjects: For this study, a total of 60 paddlers will be selected from para (Physically Challenged) and normal paddlers (National and international level) as the subjects. 60 paddlers will be further divided into 3 water sports that is Kayaking, Canoeing and Rowing. (20 Kayaking, 20 Canoeing , 20 Rowing).

Selection of Variables: Following will be the variables for this study.

- MENTAL HEALTH
- EMOTIONAL INTELLIGENCE
- COPING STRATEGIES

Criterion Measures: Following will be the criterion measures for this study.

1. Mental Health will be measured by Goldberg's General Health Questionnaire (GHQ-28) and a demographic questionnaire. GHQ-28 had four subscales (physical dysfunction, anxiety, social dysfunction and depression) that it was scored the basis of 4-point Likert scale from 0 to 3 points. The validity and reliability of this questionnaire has been approved in more than 70 countries around the world.

2. Emotional Intelligence will be measured by Daniel Goleman's 'Emotional Intelligence Questionnaire. He found that while the qualities traditionally associated with leadership such as intelligence, toughness, determination and vision are required for success, they are insufficient. Truly effective leaders are also distinguished by a high degree of emotional

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intelligence, which includes: Self-awareness, Managing emotions, Motivating oneself, Empathy, Social Skill.

3. Coping Strategies will be measure by COPE Inventory constructed by Carver, C. S. have 60 questions. The Scales (sum items listed, with no reversals of coding): Positive reinterpretation and growth, Mental disengagement, Focus on and venting of emotions, Use of instrumental social support, Active coping, Denial, Religious coping, Humor, Behavioral disengagement, Restraint, Use of emotional social support, Substance use, Acceptance, Suppression of competing activities, and Planning.

Administration of test: Before administering of the above mentioned questionnaires, the rules and procedure for filling up the questionnaire will be clearly explained to the selected subjects, so that reliable information can be obtained. Medium of questionnaire will be as per the requirement of subjects.

Statistical Techniques: Descriptive statistics and Analysis of Variance will be used to calculate the data. The level of significance will be set at 0.05

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DEPARTMENT OF HEALTH SCIENCES

Certificate

I hereby declare that the short synopsis **"COMPARISON OF SELECTED PSYCHOLOGICAL VARIABLES AMONG KAYAKING, CANOEING AND ROWING PADDLERS"** being submitted in partial fulfilment of the requirement for the degree of Doctor of Philosophy in Physical Education under Department of Health Sciences of Lakshmibai National Institute Of Physical Education, Gwalior during the academic year 2022- 2023.

It is a bonafide record of original work carried out under the supervision of Dr. Sanjeev Yadav and has not been submitted in full or part to any other university or institute for a degree or diploma.

Ravinder Kumar Kaushik

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Department of Health Sciences

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